



Sweet Squash
Technology Snapshot
Clean Label Conference, March 28-29, 2017



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Sweet Squash

- Reduced Calorie Vegetable Sweetener
 - Blend of vegetable juice concentrates and natural flavors
 - Butternut Squash Juice Concentrate
 - Pumpkin Juice Concentrate
 - Flavor modulators
- Applications



Beverages



Dairy



Frozen
Novelties



Savory

Opportunity to provide products that are lower in sugar and perceived as healthier



35% of shoppers seek a sweet snack throughout the day¹



40% of consumers are looking for snacks that have less sugar²



SWEET SQUASH: pumpkin and butternut squash juice concentrate blend for **sweetness profile**

Percentage of consumers who are paying attention to sweeteners in the following products³:

BEVERAGE

43%
Carbonated soft drinks

42%
Juice

28%
Sports drinks

DAIRY

36%
Ice cream

35%
Yogurt

SNACKS

32%
Cookies

30%
Chocolate candy

Vegetable juice concentrates

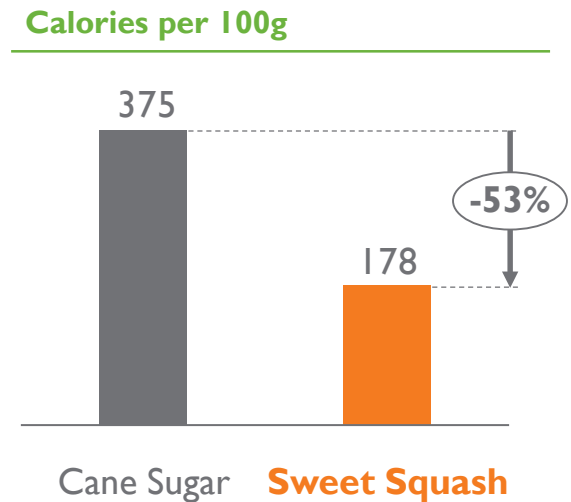
- ✓ Lower in calorie when compared to traditional juices
- ✓ Healthy and serving claims
- ✓ Not broadly perceived as sweetener by consumers

1. IRI Summit 2016, State of the Snacking Industry Report; 2. Natural Marketing Institute, 2015 Ingredient Custom Consumer Study, GMO Sweetness;

3. Mintel, Sugars and Alternative Sweeteners Report, May 2015

Sweet Squash Benefits

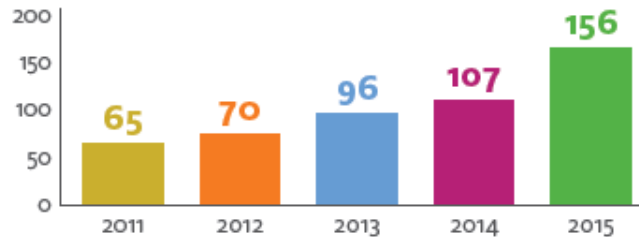
- Sugar Reduction
 - Less than **half the calories of cane sugar** on an equal weight basis
 - Excellent synergistic effect with cane sugar
- Can replace traditional “filler” juices in formulations
 - **Replace apple, pear, or white grape** juice concentrate on a 1:1 basis
 - Retain sweetness intensity with **minimal flavor impact**



Consumers Want Sweetness Without All The Calories



New product launches with “low/reduced sugar” claims in the **dairy and ice cream category** have risen steadily¹



70% of Americans are concerned about how **sugar impacts their overall health**²



60% are looking to reduce sugar, substituting lower-calorie alternatives for **full-calorie products**³

Where do “natural” sweeteners come into play?

Artificial ingredients are also on consumers’ radar when checking labels. Many want sweeteners they consider to be “natural,” and most wish they had more options from which to choose.



61% of consumers say they wish there were more “natural substitutes”⁴



25% of consumers aged 18-38 years old are willing to pay more **for a product with “natural” sweeteners**⁴

1. Mintel; 2. Mintel, Sugars and Alternative Sweeteners Report, May 2015; 3. International Food Information Council Foundation, 2014 Food & Health Survey
4. 2016 Mintel Purchase Intelligence

Nutritional Information

- Minimize “Added Sugar” call out on new nutritional labeling
 - Ex. In a 100g tea beverage with 20g of cane sugar, all 20g must be labeled “added sugars”
 - Ex. In a 100g tea beverage with 10g of cane sugar and 10g of Sweet Squash, 10g of cane sugar and 3g of Sweet Squash must be labeled “added sugars”



Tea - Cane Sugar

Nutrition Facts	
1 serving per container	
Serving size	100g (100g)
Amount Per Serving	
Calories	80
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 5mg	0%
Total Carbohydrate 24g	9%
Dietary Fiber 0g	0%
Total Sugars 20g	
Includes 20g Added Sugars	40%
Protein 0g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 188mg	4%
Vitamin A 0mcg	0%
Vitamin C 0mg	0%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

INGREDIENTS: WATER, CANE SUGAR, TEA POWDER

Tea - Sweet Squash & Cane Sugar



Nutrition Facts	
1 serving per container	
Serving size	100g (100g)
Amount Per Serving	
Calories	70
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 5mg	0%
Total Carbohydrate 18g	7%
Dietary Fiber <1g	2%
Total Sugars 14g	
Includes 13g Added Sugars	26%
Protein 1g	
Vitamin D 0mcg	0%
Calcium 26mg	2%
Iron 0.4mg	2%
Potassium 282mg	6%
Vitamin A 54mcg	6%
Vitamin C 0mg	0%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

INGREDIENTS: WATER, CANE SUGAR, BUTTERNUT SQUASH JUICE CONCENTRATE, PUMPKIN JUICE CONCENTRATE, TEA POWDER

Distinguishing Properties

- Vegetable based sweetener offers **nutritional benefits**
 - 100g basis
 - 70% DV of Vitamin A
 - 20% DV of Potassium
 - 11% DV of Dietary Fiber
 - Vegetable serving claim or partial vegetable serving claim is possible
- Offers **enhanced freeze/thaw stability** compared to traditional single strength juices
- **Pasteurized** liquid **standardized** for sugar and water content

Nutrition Facts	
1 serving per container	
Serving size	(100g)
Amount Per Serving	
Calories	180
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	
Cholesterol 0mg	0%
Sodium 10mg	0%
Total Carbohydrate 38g	14%
Dietary Fiber 3g	11%
Total Sugars 34g	
Includes 26g Added Sugars	52%
Protein 5g	
Vitamin D 0mcg	0%
Calcium 104mg	8%
Iron 3.6mg	20%
Potassium 940mg	20%
Vitamin A 630mcg	70%
Vitamin C 7mg	8%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Ingredient Declaration



- How would I label this?

Concentrated	Diluted*
<p>US and Canada:</p> <ul style="list-style-type: none">• Butternut Squash Juice Concentrate, Pumpkin Juice Concentrate, Natural Flavor(s)• Vegetable Juice Concentrate Blend (Butternut Squash and Pumpkin), Natural Flavor(s)	<p>United States:</p> <ul style="list-style-type: none">• Butternut Squash Juice from Concentrate, Pumpkin Juice from Concentrate, Natural Flavor(s) <p>Canada:</p> <ul style="list-style-type: none">• Butternut Squash Juice made from Concentrate, Pumpkin Juice made from Concentrate, Natural Flavor(s)

*Diluted to Single Strength (8° Brix) or with enough water in the product formulation to fully dilute the Sweet Squash concentrate.

Regulatory Aspects

Considerations

- 100% GRAS status
 - Includes flavor modulators
- Flavor modulator must remain at 0.1% or below in the final application
 - Can be significantly higher than 0.1% in concentrated Sweet Squash blend

- ✓ Kosher certified
- ✓ Halal compliant
- ✓ Allergen Free
- ✓ Non-GMO
- ✓ Gluten free

Questions?

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